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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/677,467	09/29/2000	Ronald Azuma	PD99W172	3369
33164	7590	03/03/2006	EXAMINER	
RAYTHEON COMPANY			STORK, KYLE R	
C/O DALY, CROWLEY, MOFFORD & DURKEE, LLP			ART UNIT	PAPER NUMBER
354A TURNPIKE STREET				
SUITE 301A			2178	
CANTON, MA 02021			DATE MAILED: 03/03/2006	

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/677,467	AZUMA, RONALD	
	Examiner	Art Unit	
	Kyle R. Stork	2178	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 16 December 2005.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-41 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) 13-21 and 32-41 is/are allowed.
 6) Claim(s) 1,3,9-12,22 and 28-31 is/are rejected.
 7) Claim(s) 2,4-8 and 23-27 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This final office action is in response to the amendment filed 16 December 2005.

2. Claims 1-41 are pending. Claims 1, 3, 12, 22, and 32 are independent claims.

The rejection of claims 1-41 under 35 U.S.C. 112 have been withdrawn based upon the applicants remarks and amendment submitted 16 December 2005. The rejection of claims 2, 4-8, 13-21, 23-27, and 32-41 under 35 U.S.C. 103 under Wiley et al. (US 6154219), Varon (US 6081764), and Basani (US 6748447), and further in view of Kelley et al. (A Book on C: Fourth Edition), has been withdrawn pursuant to applicant's remarks.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 9-12, 22, and 28-31 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Wiley et al. (US 6154219, filed 1 December 1997, hereafter Wiley) and further in view of Varon (US 6081764, filed 15 December 1997).

As per independent claim 1, Wiley discloses an apparatus for positioning labels among graphical elements on a computer graphics display, comprising:

- A display
- A processor coupled to the display and operable to:

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- o Calculate initial coordinates in accordance with an initial position of at least one label in the cluster (column 3, lines 27-29: Here, collisions (or clusters) with objects that have already been displayed are detected while calculating where to place a label)
- o Calculate new display coordinates in accordance with a new position of the at least one label in the cluster having less overlap (column 5, lines 7-18: Here, a label position is checked to see if it collides with a pre-placed label. If it does, it is rejected, and a new display position is calculated)
- o Move the at least one label from the initial coordinates to the new display coordinates (column 5, lines 7-18: Here, a label is moved from the initial coordinates to new coordinates that do not collide with other coordinates)

Wiley fails to specifically disclose the processor coupled to the display operable to:

- Display the at least one label at the initial display coordinates
- Move the at least one label on the display

However, Varon discloses the processor coupled to the display operable to:

- Display the at least one label at the initial display coordinates (column 6, lines 30-35; column 3, lines 43-62: Here, a target (airplane) is tracked from an initial position. This target has a label associated with it)
- Move the at least one label on the display (column 6, lines 30-35; column 3, lines 43-62: Here, the label moves in conjunction with the target)

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It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Wiley's apparatus with Varon's apparatus, since it would have allowed a user track a plurality of targets without swapping labels (Varon: column 3, lines 60-62).

As per independent claim 3, the applicant discloses limitations similar to those in claim 1. Claim 3 is similarly rejected under Wiley and Varon.

As per dependent claim 9, Wiley and Varon disclose the limitations similar to those in claim 3, and the same rejection is incorporated herein. Wiley further discloses the means for calculating further comprising means for comparing the degree of overlap of labels and graphical elements with the new display coordinates and the existing degree of overlap of labels and graphical elements (column 7, line 17- column 8, line 13: Here, a collision penalty is assessed. The region having the lowest collision penalty is where the label is displayed).

As per dependent claim 10, Wiley and Varon disclose the limitations similar to those in claim 3, and the same rejection is incorporated herein. Wiley further discloses the means for calculating the new display coordinates according to a stochastic method (column 8, lines 50-67).

As per dependent claim 11, Wiley and Varon disclose the limitations similar to those in claim 3, and the same rejection is incorporated herein. Wiley further discloses the means for calculating the new display coordinates according to a heuristic method (column 8, lines 50-67).

As per dependent claim 12, Wiley and Varon disclose the limitations similar to those in claim 3, and the same rejection is incorporated herein. Varon further discloses the apparatus wherein the means for moving further comprises:

- Means for interpolating a plurality of intermediate display coordinates between the initial display coordinates and the new display coordinates (column 1, line 49- column 2, line 15)
- Means for sequentially placing the labels at each of the intermediate display coordinates before placing the labels at the new display coordinates, thereby smoothing the movements of the labels on the display (column 1, line 49- column 2, line 15: Here, a flight is tracked as it moves from an initial location to a final destination. Along with the flight, a label, including the flight number, is displayed. As the flight travels along the flight path, the flight and label position are displayed, and move to intermediate coordinates along the flight path)

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to have combined Wiley and Varon's apparatus with Varon's apparatus, since it would have allowed air-traffic controllers to track a flight from departure to arrival.

As per independent claim 22, the applicant discloses limitations similar to those in claim 1. Claim 22 is similarly rejected under Wiley and Varon.

As per dependent claim 28, the applicant discloses the limitations similar to those in claim 9. Claim 28 is similarly rejected under Wiley and Varon.

As per dependent claim 29, the applicant discloses the limitations similar to those in claim 10. Claim 29 is similarly rejected under Wiley and Varon.

As per dependent claim 30, the applicant discloses the limitations similar to those in claim 11. Claim 30 is similarly rejected under Wiley and Varon.

As per dependent claim 31, the applicant discloses the limitations similar to those in claim 12. Claim 31 is similarly rejected under Wiley and Varon.

Allowable Subject Matter

5. Claims 13-21 and 32-41 are allowed.
6. Claims 2, 4-8, and 23-27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments filed 16 December 2005 have been fully considered but they are not persuasive.

The applicant argues that Wiley teaches away from the possibility of any movement of objects on the computer screen (page 13). The examiner respectfully disagrees. While the applicant points out that Wiley states that, "a senior object is not moved or removed from the display in the event of a collision (page 13)," this does not preclude Wiley from moving labels on a display screen. Instead, it simply states that a senior object will not be assigned a new position in the event of a collision, instead

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moving a different object to accommodate the senior object (column 5, lines 7-18). This does not preclude Wiley from moving objects, it simply dictates the precedence of objects.

The applicant further argues that the combination of Wiley and Varon would not result in the claimed invention, and instead would have destroyed the intended function of Wiley (page 14). The examiner respectfully disagrees. Wiley is concerned with avoiding object collisions or clusters (column 3, lines 27-29). Further, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Here, it would have been obvious to one of ordinary skill in the art to combine Wiley's reduction of label collisions with Varon's tracking of airplanes, since it would have allowed a user to track a plurality of labeled objects without swapping labels (Varon: column 3, lines 60-62).

The applicant further argues that Wiley fails to disclose a stochastic and heuristic method for calculating the new coordinates (page 15). The examiner respectfully disagrees. Wiley discloses trial and error for determining the position of the labels (column 8, line 50- column 9, line 18). If the selected label position has no collisions, the label is placed in the position, if a collision is determined, the next available position

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is determined, and the label placed in that position (column 8, line 50- column 9, line 18).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kyle R. Stork whose telephone number is (571) 272-4130. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Hong can be reached on (571) 272-4124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kyle Stork
Patent Examiner
Art Unit 2178

krs



STEPHEN HONG
SUPERVISORY PATENT EXAMINER